

PEG 400

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PEG 400 (Polyethylene Glycol 400) is a low molecular weight grade of Polyethylene glycol. It is a clear, colorless, viscous liquid. Due in part to its low toxicity, PEG 400 is widely used in a variety of pharmaceutical formulations.

Additional Properties

PEG 400 is strongly hydrophilic. The partition coefficient of polyethylene glycol 414 between hexane and water is 0.000015 ($\log P = -4.8$), indicating that when polyethylene glycol 414 is mixed with water and hexane, there are only 1.5 parts of polyethylene glycol 414 in the hexane layer per 100,000 parts of polyethylene glycol 414 in the water layer.^[1]

PEG 400 is soluble in water, acetone, alcohols, benzene, glycerin, glycols, aromatic hydrocarbons and is slightly soluble in aliphatic hydrocarbons.

Polyethylene glycol	
File:PEG400.gif	
IUPAC name	Polyethylene glycol
Identifiers	
CAS number	[25322-68-3 (http://www.commonchemistry.org/ChemicalDetail.aspx?ref=25322-68-3)]
Properties	
Molecular formula	$C_{2n}H_{4n+2}O_{n+1}$, n = 8.2 to 9.1
Molar mass	380-420 g/mol
Density	1.128 g/cm ³
Melting point	4-8 °C
Viscosity	90.0 cSt at 25 °C, 7.3 cSt at 99 °C
Hazards	
Flash point	238 °C
LD ₅₀	30 mL/kg, orally in rats

Except where noted otherwise, data are given for materials in their standard state
(at 25 °C, 100 kPa)
Infobox references

References

1. ^ T. Y. Ma, D. Hollander, P. Krugliak, K. Katz (1990). "PEG 400, a hydrophilic molecular probe for measuring intestinal permeability (<http://www.gastrojournal.org/article/PII001650859091288H/abstract>)". *Gastroenterology* **98** (1): 39–46. <http://www.gastrojournal.org/article/PII001650859091288H/abstract>.

- The Merck Index, 11th Edition
- Handbook of Pharmaceutical Excipients

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